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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,386	03/26/2004	Herbert Hartgrove	PGI6044P2441US	8629

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WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
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EXAMINER

STEELE, JENNIFER A

ART UNIT PAPER NUMBER

1771

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,386

Applicant(s)

HARTGROVE ET AL.

Examiner

Jennifer Steele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-10 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/17/2006 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 5 as amended includes the statement "in a directly adjacent" hydroentangled "united arrangement". The term directly adjacent is not included in the specification and therefore not defined to express the claimed invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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2. Claim 5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 describes a nonwoven fabric comprised of two layers that are "in a directly adjacent hydroentangled united arrangement". Layer one is a nonwoven of a blend of lyocell and modacrylic fibers. Layer two is a blend of lyocell and modacrylic and para-amid fibers. The process of hydroentanglement will mix the fibers so it is not clear how the one layer consists essentially of two types of fibers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 5-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Paire (US 5,236,769) in view of Kelly (US 2002/0004348) and Kierulff (US 6660503). Claims 5 and 6 are amended to claim a specific composition of the first layer of nonwoven fabric

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"consisting essentially of" a blend of lyocell and modacrylic fibers and a second layer of nonwoven fabric "consisting essentially of" a blend of lyocell, modacrylic and para-aramid fibers. Paire teaches nonwoven layered textile fabric that is fire resistant comprising of fibers of meta-aramid, or para-aramid, ...FR viscose,...or modacrylic compounds or mixtures of these heat-stable or heat-cross-linked fibers. (Col 2 lines 63-68 and Col 3 lines 1-2). Kierulff '503 teaches the advantages of cellulose derived fibers, composites and blends and their improved properties including flame retardant with increased softness. (col 3, line 43-45 and col 6 line 66). Kelly teaches a hydroentangled nonwoven flame-retardant fabric consisting of a blend of melamine and aramid fibers. Kelly specifically teaches that while heat and flame resistant properties of aramid fibers are well known, producing fabrics suitable to wear requires a blend with melamine fibers. (col 2, lines 54-64). It would have been obvious to one of ordinary skill in the art to blend the mixtures of flame retardant fibers into a flame retardant fabric motivated to achieve a fabric with properties of strength, fire resistance and soft hand. With regard to the limitation that one of the layers consists essentially of lyocell and modacrylic fibers, it is noted that, "for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of" for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention.").

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MPEP 2111.03 Also, If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). Therefore, the burden is on applicant to show that any additional components would materially change the basic and novel characteristics of the invention. Further, as noted in the 112 2nd paragraph rejection set forth above, since the second layer in the two layered structure employs "open" language, once the two layers are entangled, both layers will comprise fibers from each of the layers.

The current application claims a hydroentangled nonwoven fabric of two layers where the layers are bonded by hydroentangling. Paire teaches a nonwoven of 2 layers that are needlepunched and sewn/knitted together to form of textile layer of heat-stable fibers. Kelly teaches a blend of melamine and aramid fibers that are hydroentangled to produce a nonwoven fabric. It is commonly recognized in the art that there are many types of mechanical methods used to produce nonwoven fabric and layers of nonwoven fabric including hydroentanglement or needlepunching. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce and combine layers of blended fibers of nonwoven fabric by hydroentanglement.

Paire teaches a fire resistant fabric comprising layers of fabric some of which are non-woven. Paire teaches methods of joining the layers include sewn/knitted, and entangled by needle felting and needle-punching. Paire specifically teaches joining the layers by sewing and knitting and then associated by needle-punching (col 5 lines 37-

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39) to produce a reinforced nonwoven that has a comfortable feel (col 3 57-59). Paire differs from the claimed invention because Paire does not disclose hydroentangling the fibers to form a three dimensional pattern. Kelly teaches a nonwoven fire resistant fabric formed by hydroentangling the fibers with a three-dimensional image transfer device. The method taught by Kelly is to provide desirable air permeability, thermal protective properties and improved wearer comfort and safety [0015]. The current application utilizes a hydroentanglement technique with a three-dimensional image transfer device. It would have been obvious to one skilled in the art at the time the invention was made to have employed the three dimensional image transfer of Kelly to hydroentangle the fabric of Paire, motivated by the teaching of Kelly that imparting the three dimensional pattern to the fabric produces a fire resistant fabric that is comfortable to wear.

Response to Arguments

4. Applicant's arguments filed 8/17/2006 have been fully considered but they are not persuasive. Applicant's addressed the indefiniteness rejection under 35 USC 112, second paragraph, and removed the previously added "100%" qualification for the recited nonwoven fabric. The substitute language of "in a directly adjacent, hydroentangled united arrangement" is addressed in the current office action.

5. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., char, united arrangement and synergistic relationship) are not recited in the

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rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. Applicant's arguments that "natural fibers" taught in Price are not equivalent in to lyocell fibers are accepted. Kierulff teaches, "the polysaccharide is a cellulosic polymer fiber, i.e. containing cellulose or cellulose derivatives, preferably prepared from cotton, viscose (rayon), lyocell, flax (linen), ramie or any blend thereof;" (col 6 lines 63 and col 7 lines 1-4). Current office action cites additional reference to Paire who teaches lyocell in a fire resistant layered nonwoven fabric.

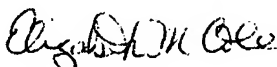
7. Applicant's arguments to reconsider claims 6, 9 and 10 as being obvious over Price in view of Kierulff as applied to claim 5 and further in view of Putnam has been fully considered but is not persuasive. The reference to Putnam is no longer cited in the current office action and therefore the fact that Putnam does not describe para-amid fiber technology is not relevant. The current office action states that the cited references for joining nonwoven layers include sewing/knitting and needlepunching while the current application claims a hydroentangled three dimensional imaging nonwoven fabric. Sewing/knitting, needlepunching and hydroentangled with or without three dimensional imaging are methods of producing nonwoven fabrics. The current application does not claim the advantages of hydroentangled with a three-dimensional image and therefore this argument is not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Steele whose telephone number is (571) 272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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PRIMARY EXAMINER